# Proton Radiography Proposal Form

Submit to: Los Alamos National Laboratory, LANSCE User Office, Los Alamos, NM 87545
UNCLASSIFIED materials to MS H831, CLASSIFIED materials to MS H803

| **Title:** | *(To be completed by LANSCE)* | |
|---|---|---|
| | **Number** | **Date Received** |

**Name of Shot Series**

Number of shots previously fired in this series: _____ Classification level: _____

Number of dynamic shots proposed: _____ Needs proofing ☐ Has been proofed ☐

Number of static measurements proposed (describe):

_____

_____

_____

Principal Investigator: _____ Citizenship: _____

Institution & Address: _____

Phone: _____ Fax: _____ E-mail: _____

| **Co-Investigators** (attach additional sheets if necessary) | **Institution** | **Citizenship** | **E-mail Address** |
|---|---|---|---|
| | | | |

**Primary pRad Team Contact:**

Estimated amount of beam time for static and dynamic experiments: _____

Dates Desired: _____ Impossible Dates: _____

Milestone requirements from external programs (describe):

_____

_____

_____

**For statistical purposes, please categorize your proposal:**

| **RESEARCH AREA (check all that apply)** | **FUNDING AGENCY (check all that apply)** |
|---|---|
| ☐ Defense Science | ☐ DOE/DP (campaign) _____ |
| ☐ Engineering | ☐ LDRD (title) _____ |
| ☐ Materials Science | ☐ DOD _____ |
| ☐ Medical Applications | ☐ Industry (describe) _____ |
| ☐ Nuclear Physics | ☐ Other US Gov't: _____ |
| ☐ Other: _____ | ☐ Other: _____ |

# PROTON RADIOGRAPHY SAFETY & EXPERIMENTAL DETAILS

## Shot Configuration

☐ Explosive Experiment

_____

_____

☐ Gas handling systems (specify):

_____

_____

HE weight (TNT eqv.) _____ (<____ lbs) Type:

Fire set requirements (specify proposed detonator and special fire set needs):

_____

_____

_____

_____

Firing Temperature (specify acceptable range):

**Inert Materials**

| Material: | Quantity: |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

## Radiographic Configuration

Minimum Field of View: Minimum # of Frames:

**Timing requirements** Explosive: Spacing:

☐ 4’ vessel, -I system, two planes ~14-21 radiograph times, 120 mm FOV

☐ 6’ vessel, -I system, two image planes ~14-21 radiograph times, 120 mm FOV

☐ 4’vessel, -I X3 system, one image plane, 5-7 radiograph times, 40 mm FOV

Optical magnification (specify):

_____

Scintillator requirements (specify):

_____

## Static Measurements

Motion Control:

_____

_____

_____

Alignment:

_____

_____

_____

Describe Radioactive Materials:

_____

_____

_____

## PROTON RADIOGRAPHY SAFETY & EXPERIMENTAL DETAILS (Continued)

**Diagnostics**

- ☐ VISAR (minimum number of measurement points):
- ☐ Pins (specify material, type number and readout requirements):
  _____
  _____
- ☐ Other:
  _____

**Safety**

- ☐ Proposed experiment known to be outside existing authorization basis (if yes, explain):
  _____
  _____
  _____
- ☐ Proposed experiment introduces known hazards outside existing HCP (if yes, explain):
  _____
  _____
  _____

**Status**

- ☐ Parts have been designed.
- ☐ Parts have been designed, not fabricated. Specify expected fabrication date: _____
- ☐ Parts have been fabricated, ready for proof or experiment.

**Pre-shot Calculations**

- ☐ Pre-shot calculations have been completed (describe):
  _____
  _____
  _____
  _____
- ☐ Pre-shot calculations have not been completed (expected completion date):
  _____
  _____
  _____

I certify that the above information is correct to the best of my knowledge. **E-mail submission by the Principal Investigator constitutes signature. Do not follow up with a hard copy.**

| Signature | Printed name | Date |
|---|---|---|

## DETAILED DESCRIPTION OF THE EXPERIMENT OR ACTIVITY

*(Describe the science of engineering research being addressed, importance, and a description of how this experiment campaign will contribute to the progress of this research.)*

## DETAILED DESCRIPTION OF THE EXPERIMENT OR ACTIVITY (continued)